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EXAMINER	
GHEE, ASHANTI	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/613,868	Applicant(s) IDE, NAOAKI	
	Examiner Ashanti Ghee	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) _____ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-18 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 11 July 2000 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 3,4.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because the length is too long. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1, 8, and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regards to claims 1 and 8, the section describing "moving ... the surface of a document table" is not distinctly defined in the specification (see page 36, lines 1-5). The overall summary of the invention is an image reading device with a light irradiating device that moves and scans a document that has been placed on a document table, not the actual movement of the document table. Is the document table actually moving or is it stationary? Any response to clarify this question will be greatly appreciated.

4. Claim 1 recites the limitation "the surface of a document table", "the reflected light", and "the execution" in lines 5, 8, and 13, respectively, of the claim. There is insufficient antecedent basis for this limitation in the claim.

5. Claim 8 recites the limitation "the surface of a document table", "the reflected light", and "the execution" in lines 5, 6-7, and 13, respectively, of the claim. There is insufficient antecedent basis for this limitation in the claim.

6. Claim 15 recites the limitation "the document table" and "the reflected light" in lines 4-5 and 7, respectively, of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ikeda et al. (US Patent No. 5,077,605) in view of Matsunawa et al. (US Patent No. 5,216,498).

Regarding claim 1, Ikeda discloses an image reading device comprising: light irradiating means for moving and scanning the surface of a document table while irradiating the light (col. 3, lines 35-51); color photoelectric conversion means for reading the reflected light of the light from the light irradiating means and photoelectric converting into plural color signals (col. 3, lines 35-51).

Although Ikeda does not disclose a correction means or executing a color balance correction and a stray light correction simultaneously with the execution of a

shading correction of plural signals that are photoelectric converted by the color photoelectric conversion means, Matsunawa discloses correction means or executing a color balance correction and a stray light correction simultaneously with the execution of a shading correction of plural signals that are photoelectric converted by the color photoelectric conversion means (col. 4, lines 18-37).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Ikeda and Matsunawa due to both references disclosing color image reading apparatuses to provide an image processing apparatus that can perform full color conversion.

Regarding claim 2, Ikeda does not disclose storage means for storing signal data comprising plural color signals that are photoelectric converted by the color photoelectric conversion means; wherein the correction means executes the color balance correction and the stray light correction simultaneously with the execution of the shading correction based on the signal data stored in the storage means.

However, Matsunawa discloses an image reading device according to claim 1 further comprising: storage means for storing signal data comprising plural color signals that are photoelectric converted by the color photoelectric conversion means (col. 3, lines 25-col. 4, lines 1-17); wherein the correction means executes the color balance correction and the stray light correction simultaneously with the execution of the shading correction based on the signal data stored in the storage means (col. 4, lines 18-46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Ikeda and Matsunawa due

to both references disclosing color image reading apparatuses to provide an image processing apparatus that can perform full color conversion.

Regarding claim 3, Ikeda does not disclose white reference means provided at the side of the document table for being read and photoelectric, converted by the color photoelectric conversion means; wherein the storage means stores white document data comprising plural color signals that are read and photoelectric converted by the color photoelectric conversion means from a white document in color equivalent to the white reference means placed on the document table; and wherein the correction means executes the color balance correction and the stray light correction simultaneously with the execution of the shading correction based on the white document data stored in the storage means.

However, Matsunawa discloses an image reading device according to claim 2 further comprising: white reference means provided at the side of the document table for being read and photoelectric, converted by the color photoelectric conversion means (col. 4, lines 18-46); wherein the storage means stores white document data comprising plural color signals that are read and photoelectric converted by the color photoelectric conversion means from a white document in color equivalent to the white reference means placed on the document table (col. 4, lines 18-46); and wherein the correction means executes the color balance correction and the stray light correction simultaneously with the execution of the shading correction based on the white document data stored in the storage means (col. 4, lines 18-46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Ikeda and Matsunawa due to both references disclosing color image reading apparatuses to provide an image processing apparatus that can perform full color conversion.

Regarding claim 4, Ikeda does not disclose the correction means executes the shading correction and at the same time, the stray light correction by setting the white document data stored in the storage means as desired values and executes the white balance correction by correlating the white reference means with the white reference data comprising plural color signals that are read and photoelectric converted by the color photoelectric conversion means and the white document data stored in the storage means.

However, Matsunawa discloses an image reading device according to claim 3, wherein the correction means executes the shading correction and at the same time, the stray light correction by setting the white document data stored in the storage means as desired values and executes the white balance correction by correlating the white reference means with the white reference data comprising plural color signals that are read and photoelectric converted by the color photoelectric conversion means and the white document data stored in the storage means (col. 3, lines 25-col. 4, lines 1-46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Ikeda and Matsunawa due to both references disclosing color image reading apparatuses to provide an image processing apparatus that can perform full color conversion.

Regarding claim 5, Ikeda discloses an image reading device according to claim 4, wherein the correction means further executes the correction of uneven density in the moving and scanning direction of the light irradiating means simultaneously with t-.he other corrections (col. 15, lines 15-col. 6, lines 1-21).

Regarding claim 6, Ikeda discloses an image reading device according to claim 5, wherein in the moving and scanning direction of a uniform density image document placed on the document table read and photoelectric converted by the color photoelectric conversion means (col. 3, lines 32-col. 4, lines 1-3); and the correction means executes the uneven density correction by executing the color balance correction by setting the sub-scanning data (col. 15, lines 15-col. 16, lines 1-21).

Although Ikeda does not disclose the storage means stores sub-scanning data comprising plural color signals that are plural positions; and stored in the storage means as desired values for the color balance correction, Matsunawa discloses the storage means stores sub-scanning data comprising plural color signals that are plural positions (col. 3, lines 25-col. 4, lines 1-46); and stored in the storage means as desired values for the color balance correction (col. 3, lines 25-col. 4, lines 1-46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Ikeda and Matsunawa due to both references disclosing color image reading apparatuses to provide an image processing apparatus that can perform full color conversion.

Regarding claim 7, Ikeda discloses an image reading device according to claim 6, wherein the sub-scanning data comprises a mean value of plural pixels at plural positions in the moving and scanning direction (col. 13, lines 61-col. 14, lines 1-15).

Regarding claim 8, Ikeda discloses an image reading device comprising: a light irradiating device for moving and scanning the surface of a document while irradiating the light (col. 3, lines 52-col. 4, lines 1-3); a color CCD sensor for reading the reflected light, of the light from the light irradiating device and photoelectric converting into plural color signals (col. 3, lines 35-51).

Although Ikeda does not disclose a correction device for executing a color balance correction and a stray light correction simultaneously with the execution of a shading correction of plural color signals that are photoelectric converted by the color CCD sensor, Matsunawa discloses a correction device for executing a color balance correction and a stray light correction simultaneously with the execution of a shading correction of plural color signals that are photoelectric converted by the color CCD sensor (col. 4, lines 18-37).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Ikeda and Matsunawa due to both references disclosing color image reading apparatuses to provide an image processing apparatus that can perform full color conversion.

Regarding claim 9, Ikeda does not disclose a storage device for storing signal data comprising plural color signals that are photoelectric converted by the color CCD sensor; wherein the correction means executes the color balance correction and the

stray light correction simultaneously with the execution of the shading correction based on the signal data stored in the storage device.

However, Matsunawa discloses an image reading device according to claim 8 further comprising: a storage device for storing signal data comprising plural color signals that are photoelectric converted by the color CCD sensor (col. 3, lines 25-col. 4, lines 1-17); wherein the correction means executes the color balance correction and the stray light correction simultaneously with the execution of the shading correction based on the signal data stored in the storage device (col. 4, lines 18-46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Ikeda and Matsunawa due to both references disclosing color image reading apparatuses to provide an image processing apparatus that can perform full color conversion.

Regarding claim 10, Ikeda does not disclose a white shading correction plate provided at the side of the document table for being read and photoelectric converted by the color CCD sensor; wherein the storage device stores white document data comprising plural color signals that are read and photoelectric converted by the color CCD sensor from a white document in color equivalent to the to the white shading correction plate placed on the document table; and wherein the correction device executes the color balance correction and the stray light correction simultaneously with the execution of the shading correction based on the white document data stored in the storage device.

However, Matsunawa discloses an image reading device according to claim 9

further comprising: a white shading correction plate provided at the side of the document table for being read and photoelectric converted by the color CCD sensor (col. 4, lines 18-46); wherein the storage device stores white document data comprising plural color signals that are read and photoelectric converted by the color CCD sensor from a white document in color equivalent to the to the white shading correction plate placed on the document table (col. 4, lines 18-46); and wherein the correction device executes the color balance correction and the stray light correction simultaneously with the execution of the shading correction based on the white document data stored in the storage device (col. 4, lines 18-46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Ikeda and Matsunawa due to both references disclosing color image reading apparatuses to provide an image processing apparatus that can perform full color conversion.

Regarding claim 11, Ikeda does not disclose the correction device executes the shading correction and at the same time, the stray light correction simultaneously by setting the white document data stored in the storage device as desired values and executes the color balance correction by correlating the white reference data comprising plural color signals that are the shading correction plate read and photoelectric converted by the color CCD sensor with the white document data stored in the storage device.

However, Matsunawa discloses an image reading device according to claim 10, wherein the correction device executes the shading correction and at the same time, the

stray light correction simultaneously by setting the white document data stored in the storage device as desired values and executes the color balance correction by correlating the white reference data comprising plural color signals that are the shading correction plate read and photoelectric converted by the color CCD sensor with the white document data stored in the storage device (col. 3, lines 25-col. 4, lines 1-46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Ikeda and Matsunawa due to both references disclosing color image reading apparatuses to provide an image processing apparatus that can perform full color conversion.

Regarding claim 12, Ikeda discloses an image reading device according to claim 11, wherein the correction device further executes the uneven density correction in the moving and scanning direction of the light irradiating device simultaneously with the other corrections (col. 15, lines 15-col. 16, lines 1-21).

Regarding claim 13, Ikeda discloses an image reading device according to claim 12, wherein in the moving and scanning direction of an uniform density image document placed on the document table, read and photoelectric converted by the color CCD sensor (col. 3, lines 52-col. 4, lines 1-3), and the correction device executes the uneven density correction by executing the color balance correction using the sub-scanning data (col. 15, lines 15-col. 16, lines 1-21).

Although Ikeda does not disclose the storage device stores plural color signals that are plural positions and stored in the storage device as desired values for the color balance correction, Matsunawa discloses the storage device stores plural color signals

that are plural positions (col. 3, lines 25-col. 4, lines 1-46) and stored in the storage device as desired values for the color balance correction (col. 3, lines 25-col. 4, lines 1-46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Ikeda and Matsunawa due to both references disclosing color image reading apparatuses to provide an image processing apparatus that can perform full color conversion.

Regarding claim 14, Ikeda discloses an image reading device according to claim 13, wherein the sub-scanning data comprises a mean value of plural pixels at plural positions in the moving and scanning direction (col. 13, lines 61-col. 14, lines 1-15).

Regarding claim 15, Ikeda discloses an image reading device comprising: light irradiating means for moving and scanning a document while irradiating the light to the document table (col. 3, lines 52-col. 4, lines 1-3); color photoelectric conversion means for reading the reflected light of the light from the light irradiating means and photoelectric converting it into plural color signals (col. 3,lines 35-51).

Although Ikeda does not disclose correction means or correcting the uneven density of plural color signals that are photoelectric converted by the color photoelectric conversion means in the moving and scanning direction of the light irradiating means, Matsunawa discloses correction means or correcting the uneven density of plural color signals that are photoelectric converted by the color photoelectric conversion means in the moving and scanning direction of the light irradiating means (col. 4, lines 18-37).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Ikeda and Matsunawa due to both references disclosing color image reading apparatuses to provide an image processing apparatus that can perform full color conversion.

Regarding claim 16, Ikeda does not disclose storage means for storing signal data comprising plural color signals that are photoelectric converted by the color photoelectric conversion means; wherein the correction means executes the uneven density correction by executing the color balance correction based on the signal data stored in the storage means.

However, Matsunawa discloses an image reading device according to claim 15 further comprising: storage means for storing signal data comprising plural color signals that are photoelectric converted by the color photoelectric conversion means (col. 3, lines 25-col. 4, lines 1-17); wherein the correction means executes the uneven density correction by executing the color balance correction based on the signal data stored in the storage means (col. 4, lines 18-46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Ikeda and Matsunawa due to both references disclosing color image reading apparatuses to provide an image processing apparatus that can perform full color conversion.

Regarding claim 17, Ikeda discloses an image reading device according to claim 16, in the moving and scanning direction of the uniform density image document placed on the document table, read and photoelectric converted by the color photoelectric

conversion means (col. 3, lines 52-col. 4, lines 1-3), and the correction means executes the uneven density correction by executing the color balance correction using the sub-scanning data (col. 15, lines 15-col. 16, lines 1-21).

Although Ikeda does not disclose the storage means stores the sub-scanning data comprising plural color signals that are the plural positions and stored in the storage means as desired values for the color balance correction, Matsunawa discloses the storage means stores the sub-scanning data comprising plural color signals that are the plural positions (col. 3, lines 25-col. 4, lines 1-46) and stored in the storage means as desired values for the color balance correction (col. 3, lines 25-col. 4, lines 1-46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to combine the teachings of Ikeda and Matsunawa due to both references disclosing color image reading apparatuses to provide an image processing apparatus that can perform full color conversion.

Regarding claim 18, Ikeda discloses an image reading device according to claim 17, wherein the sub-scanning data comprises a mean value of plural pixels at the plural positions in the moving and scanning direction (col. 13, lines 61-col. 14, lines 1-15).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Suzuki et al. (US Patent No. 6,597,472 B1) discloses a halftone dot image discrimination method.

Matsuura (US Publication No. 2003/0016881 A1) discloses an image processing apparatus and method.

Nakayama et al. (US Patent No. 4,608,595) discloses a white-balance correction for negative-to-positive conversion.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ashanti Ghee whose telephone number is (703) 306-3443. The examiner can normally be reached on Mon-Thurs and alt. Fri. (7-4PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly A. Williams can be reached on (703) 305-4863. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AG

MARK WALLERSON
PRIMARY EXAMINER

Ashanti Ghee
Examiner
Art Unit 2626

March 20, 2004